Public Notice

US Army Corps
of Engineers
Fort Worth District

Applicant: City of New Braunfels

Permit Application No.: SWF-2006-613

Date: June 21, 2007

The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

Regulatory Program

Since its early history, the U.S. Army Corps of Engineers has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the U.S. Army Corps of Engineers Regulatory Program.

Section 10

The U.S. Army Corps of Engineers is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate *all work or structures in or affecting the course, condition or capacity of navigable waters of the United States.* The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

Section 404

The U.S. Army Corps of Engineers is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the *discharge of dredged and fill material into all waters of the United States, including wetlands.* The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

Contact

Name: Ms. Jennifer Knowles

Phone Number: (817) 886-1863

JOINT PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT

AND

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUBJECT: Application for a Department of the Army Permit under Section 404 of the Clean Water Act (CWA) and for water quality certification under Section 401 of the CWA to discharge dredged and fill material into waters of the United States (U.S.) associated with the construction of the South Tributary Flood Control Project in the city of New Braunfels, in Comal and Guadalupe Counties, Texas.

APPLICANT: City of New Braunfels
Mr. Michael Short
Director of Public Works
P.O. Box 311747
New Braunfels, Texas 78131-1747

APPLICATION NUMBER: SWF-2006-613

DATE ISSUED: June 21, 2007

LOCATION: The proposed flood control project would be located south of Interstate Highway (IH) 35 and north of County Line Road, between Farm-to-Market (FM) 725 and FM 1044 along the South Tributary of the Guadalupe River in the city of New Braunfels, in Comal and Guadalupe Counties, Texas. The proposed project would be located approximately at UTM coordinates 585506.283 East and 3283480.803 North (Zone 14) on the New Braunfels East and New Braunfels West 7.5-minute USGS quadrangle maps in the USGS Hydrologic Unit 12100202.

OTHER AGENCY AUTHORIZATIONS: State Water Quality Certification

PROJECT DESCRIPTION: The proposed project would result in modifications to the South Tributary of the Guadalupe River for flood control purposes south of IH 35, north of County Line Road, and generally between FM 725 and FM 1044 in the city of New Braunfels, Comal and Guadalupe Counties, Texas (Sheets 1-14 of 14). The proposed project would provide flood protection for the watershed by lowering the 100-year base flood elevation through containing peak 100-year flows, assuming ultimate watershed development, within channel banks. Project components include channel modifications, stormwater detention, and culvert replacement.

Table 2 - Summary of Aquatic Features that are not Waters of the U. S. (Sheets 3-4 of 14)

Feature ID	Classification	Area (acres)
5	Off-channel pond	0.34
11	Off-channel pond	0.87
14	Off-channel pond	0.10
19	Off-channel pond	0.30
20	Off-channel pond	0.49
Total:	---	**2.10**

The South Tributary has been dramatically altered through past activities, including trapezoidal channelization. Through landscape alteration and years of maintenance the drainage feature has degraded to a state in which the stream channel is separated into different pieces, interrupted by continuous stretches of emergent wetlands where the stream channel has been virtually removed from the landscape. Emergent wetlands established in areas that were unable to effectively drain. The existing South Tributary channel does not contain high flows during heavy rain events, thereby flooding adjacent residences and developments.

Dominant woody vegetation in upland areas consist of mesquite (*Prosopis glandulosa*) and hackberry (*Celtis laevigata*), shrub and saplings include agarita (*Berberis trifoliate*) and mesquite, and herbaceous vegetation includes false garlic (*Nothoscordum bivalve*), primrose (*Oenothera speciosa)*, giant ragweed (*Ambrosia trifida)*, annual sumpweed (*Iva annua)*, Texas broomweed (*Amphiachyris amoenum*), and firewheel (*Gaillardia pulchella*). Some landscapes on the downstream portion of the project area have been highly maintained and are dominated by bermuda grass (*Cynodon dactylon*). The South Tributary transitions into a grass swale in the downstream portion of the project area. Plant species found in inundated/saturated areas include spikerush (*Eleocharis acicularis*), smartweed (*Polygonum hydropiperoides*), cattail (*Typha latifolia*), giant river cane (*Arundinaria gigantea*), and buttonbush (*Cephalanthus occidentalis*). Further downstream, the South Tributary transitions into a trapezoidal channel predominantly covered by grass species, including dallisgrass (*Paspalum dilatatum*), joint grass (*Paspalum distichum*), and bermuda grass, with some scattered frog fruit (*Phyla nodiflora*).

Construction of the proposed project would result in excavation of approximately 315,000 cubic yards of material and the discharge of approximately 25,000 cubic yards of dredged and fill material into waters of the U.S. (Sheets 6-11 of 14). With the exception of a 0.39-acre on-channel pond (Feature ID 21), all waters of the U.S. on-site would be permanently impacted, which would include a 0.29-acre on-channel pond, 4.41 acres of emergent wetlands, 3,710-linear-foot (0.88 acre) of ephemeral stream, and 6,570-linear-foot (3.89 acres) of intermittent stream. Stream flows would be maintained through the installation of a new channel with a meandering 8-foot-wide pilot channel, that would be designed to contain the 100-year flood

event within the channel banks. Upstream flow would be slowed through two on-channel detention ponds with flow-through into the main channel.

Channel Modifications. Major constraints to project design include existing utilities that parallel or intersect the project area, and existing residential and commercial structures adjacent to the project area. Existing channels would be modified into a wider floodplain channel that would contain 100-year flood events, with a meandering low flow pilot channel. The bottom width of the floodplain channel would range from 30 to 180 feet, dependent on location and site constraints (Sheets 6-13 of 14). The meandering pilot channel would be approximately 8 feet wide and would convey base flows (Sheet 10 of 14 for pilot channel details). Required right-of-way width for the proposed channel modifications would range from 90 to 365 feet. Side slopes along the floodplain channel would generally be constructed at 4:1 (horizonal:vertical). Where constraints dictate, side slopes would equal 3:1 and 2:1 with some form of armoring, such as rock mattresses to protect the slopes and prevent erosion. Grading and placement of fill is proposed in some overbank areas to ensure that stormwater runoff drains toward the channel. Upon completion, the meandering low-flow channel would be approximately 13,100 linear feet. Nine gabion drop structures, ranging in height from 1.5 feet to 10 feet, would be strategically placed throughout the streamlength to reduce excessive channel flow velocities, shear stresses, and avoid conflicts with existing utility lines. Pools would be created at the base of each of the drop structures to provide stream habitat diversity. Approximately 2,850 cubic yards (cy) of material would be discharged into waters of the U.S. for construction of the gabion drop structures.

Detention Ponds. Two stormwater detention ponds would be located on Tributary A, upstream of County Line Road (Sheet 11 of 14). The ponds would be sized to detain peak flows from a 100-year storm event, assuming ultimate watershed development. Construction of the ponds would consist of a combination of excavation and placement of a berm/dam system, with the height of the dams at an average of 3.5 feet over the 100-year water surface elevation to accommodate flows from a 100-year storm event (Sheet 14 of 14). Each pond would contain an overflow weir approximately 200 feet in length. The lower detention pond (Pond 1) would cover a surface area of approximately 14.5 acres, and the upper pond (Pond 2) would cover a surface area of approximately 25 acres. The two pond system would provide a storage capacity of over 400-acre-feet. Each pond would have an internal pilot channel to collect and convey runoff from smaller rainfall events, with Pond 2 draining into Pond 1. Pond 1 would outfall into Tributary A at County Line Road. Stormwater runoff draining into the ponds would be collected by a system of drainage ditches and drains. Trash racks would be placed at the downstream end of Pond 1, at the outfall structure.

Culvert Replacement. The Lou Ann Drive culverts (two 24-inch diameter pipes) would be replaced with five 6-foot by 5-foot box culverts (Sheet 10 of 14). The existing culverts were designed to convey the 10-year storm event, therefore new culverts are necessary to convey a 100-year storm event.

The applicant investigated several alternatives for this proposed project. Under the no-build alternative, the proposed flood control project would not be constructed. This alternative would not impact waters of the U.S. and all adverse environmental effects associated with the proposed project would be avoided at least for the short term. The no-build alternative would not provide protection from flooding of residences and developments along the project corridor. The applicant considered relocating tenants adjacent to the South Tributary floodplain. However, the density of residences and commercial developments within the immediate vicinity of the South Tributary would make movement of all individuals out of the floodplain economically infeasible. The applicant considered various project layouts, including smaller and larger footprints, off-channel stormwater detention, and implementing only segments of the proposed project. Other designs would partially decrease the level of flooding currently experienced. The applicant feels that the proposed project would provide the greatest benefit in reducing existing and future flooding.

The applicant investigated avoidance and minimization of adverse impacts to waters of the U.S. Feature ID 21, a 0.39-acre on-channel pond, would be avoided. The channel modifications primarily consist of earthen material excavated and redeposited on-site, with minimal hard armoring. Where armoring structures are necessary to protect utilities, discourage erosion, and slow water velocity, the minimum amount of fill necessary would be utilized. Through utilization of Best Management Practices (BMPs), adverse impacts to waters of the U.S. on-site and downstream would be minimized.

The applicant has prepared a mitigation plan and proposes to minimize adverse impacts to waters of the U.S. on-site. Proposed mitigation would include re-seeding with native grass and forbs within the bottom of the new channel. Approximately 30 acres of channel bottom would be seeded with the native plant mix. No mowing would be permitted within 10 feet of either side of the low flow channel. The nature of the flood control project necessitates periodic mowing outside of the 28-foot-wide mitigation area, however, the intent is to avoid disturbing the vegetation, hydrology, and other components of the area to the maximum extent practicable. The applicant believes that further avoidance and minimization efforts on-site would not be feasible for production of a functioning flood control project. Therefore, the applicant proposes to compensate for unavoidable adverse impacts through compensatory mitigation. As compensatory mitigation, the on-site mitigation area would be protected and managed in perpetuity and a notice of restriction would be placed on the 8.4-acres as a wetland and wildlife preserve.

PUBLIC INTEREST REVIEW FACTORS: This application will be reviewed in accordance with 33 CFR 320-331, the Regulatory Program of the U. S. Army Corps of Engineers (USACE), and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U. S. Environmental Protection Agency pursuant to Section 404(b)(1) of the CWA. The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impact, of the proposed activity on the public interest. That decision will reflect the national concerns for both protection and utilization of important

resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including its cumulative effects. Among the factors addressed are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the USACE in determining whether to issue, issue with modifications, or conditions, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

STATE WATER QUALITY CERTIFICATION: This project would result in a direct impact of greater than three acres of waters of the state or 1,500 linear feet of streams (or a combination of the two is above the threshold), and as such would not fulfill Tier I criteria for the project. Therefore, Texas Commission on Environmental Quality (TCEQ) certification is required. Concurrent with USACE processing of this Department of the Army application, the TCEQ is reviewing this application under Section 401 of the Clean Water Act, and Title 30, Texas Administrative Code Section 279.1-13 to determine if the work would comply with State water quality standards. By virtue of an agreement between the USACE and the TCEQ, this public notice is also issued for the purpose of advising all known interested persons that there is pending before the TCEQ a decision on water quality certification under such act. **Any comments concerning this application may be submitted to the Texas Commission on Environmental Quality, 401 Coordinator, MSC-150, P.O. Box 13087, Austin, Texas 78711-3087.** The public comment period extends 30 days from the date of publication of this notice. A copy of the public notice with a description of the work is made available for review in the TCEQ's Austin Office. The complete application may be reviewed in the USACE's office. The TCEQ may conduct a public meeting to consider all comments concerning water quality if requested in writing. A request for a public meeting must contain the following information: the name, mailing address, application number, or other recognizable reference to the application; a brief description of the interest of the requestor, or of persons represented by the requestor; and a brief description of how the application, if granted, would adversely affect such interest.

ENDANGERED AND THREATENED SPECIES: The USACE has reviewed the U.S. Fish and Wildlife Service's latest published version of endangered and threatened species to determine if

any may occur in the project area. The proposed project would be located in a county where the black-capped vireo (*Vireo atricapilla*), Comal Springs dryopid beetle (*Stygoparnus comalensis*), Comal Springs riffle beetle (*Heterelmis comalensis*), fountain darter (*Etheostoma fonticola*), golden-cheeked warbler (*Dendroica chrysoparia*), Peck's cave amphipod (*Stygobromus pecki*), San Marcos gambusia (*Gambusia georgei*), San Marcos salamander (*Eurycea nana*), Texas blind salamander (*Typhlomolge rathbuni*), Texas wild-rice (*Zizania texana*), are known to occur or may occur as migrants. The black-capped Vireo, Comal Springs dryopid beetle, Comal Springs riffle beetle, fountain darter, golden-cheeked warbler, Peck's cave amphipod, San Marcos gambusia, Texas blind salamander, and Texas wild-rice are endangered species and the San Marcos salamander is a threatened species. Our initial review indicates that the proposed work would have no effect on federally-listed endangered or threatened species.

NATIONAL REGISTER OF HISTORIC PLACES: The applicant surveyed the route of the proposed project was surveyed for historic and prehistoric cultural resources. Pedestrian survey and shovel testing only identified traces of early 20th century trash. There was no indication of any sites or structures that might be eligible for inclusion in the National Register of Historic Places. Additionally, the area has a low potential for identification of buried historic properties that may be encountered during construction. There are no additional plans for historic properties work.

FLOODPLAIN MANAGEMENT: The USACE is sending a copy of this public notice to the local floodplain administrator. In accordance with 44 CFR part 60 (Flood Plain Management Regulations Criteria for Land Management and Use), the floodplain administrators of participating communities are required to review all proposed development to determine if a floodplain development permit is required and maintain records of such review.

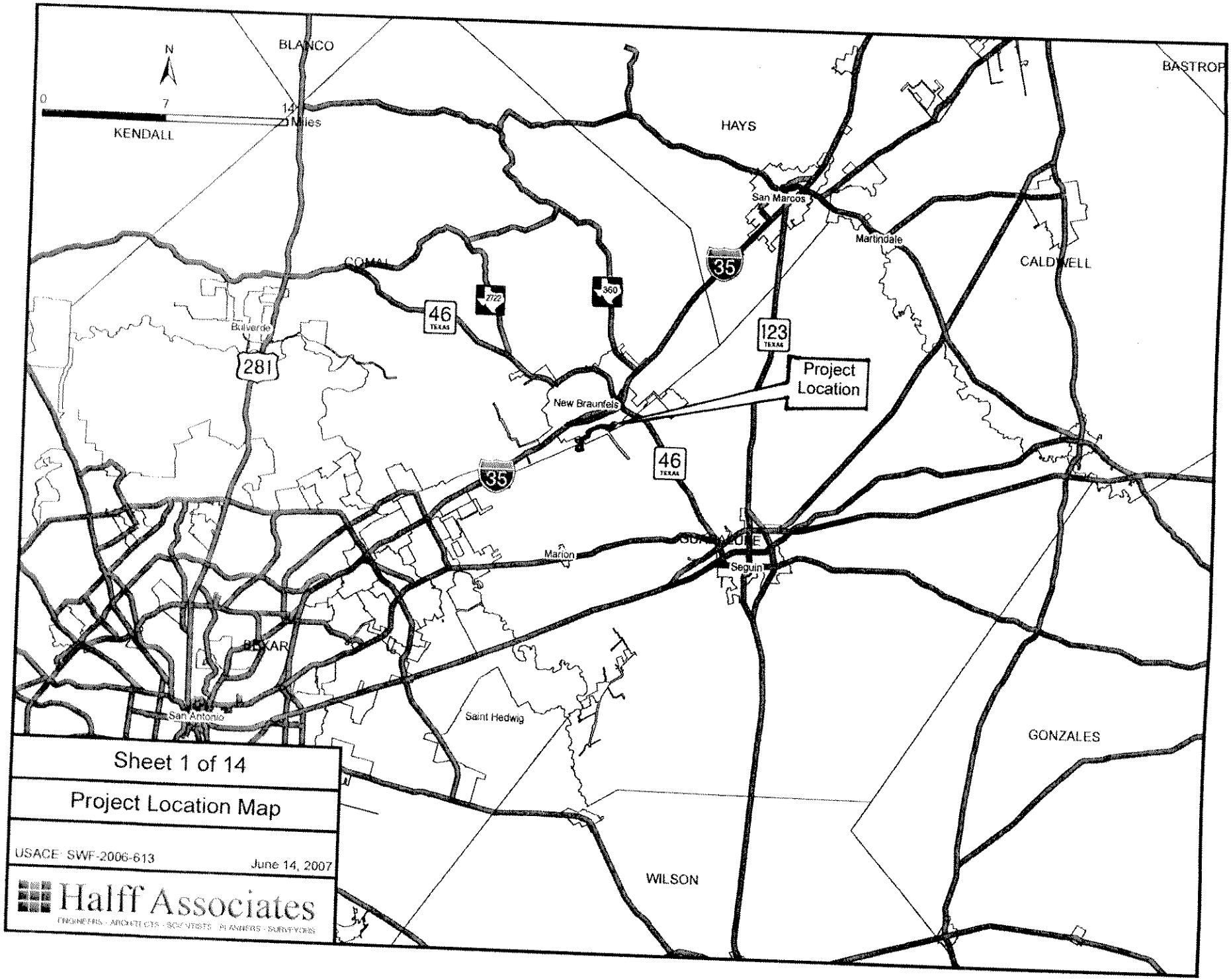
SOLICITATION OF COMMENTS: The public notice is being distributed to all known interested persons in order to assist in developing fact upon which a decision by the USACE may be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

PUBLIC HEARING: Prior to the close of the comment period any person may make a written request for a public hearing setting forth the particular reasons for the request. The District Engineer will determine whether the issues raised are substantial and should be considered in his permit decision. If a public hearing is warranted, all known interested persons will be notified of the time, date, and location.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before July 20, 2007, which is the close of the comment period. Extensions of the comment period may be granted for valid reasons provided a written request is received by the limiting date. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to Jennifer

Knowles; Regulatory Branch, CESWF-PER-R; U. S. Army Corps of Engineers; Post Office Box 17300; Fort Worth, Texas 76102-0300. You may visit the Regulatory Branch in Room 3A37 of the Federal Building at 819 Taylor Street in Fort Worth between 8:00 A.M. and 3:30 P.M., Monday through Friday. Telephone inquiries should be directed to (817) 886-1731. Please note that names and addresses of those who submit comments in response to this public notice may be made publicly available.

DISTRICT ENGINEER
FORT WORTH DISTRICT
CORPS OF ENGINEERS



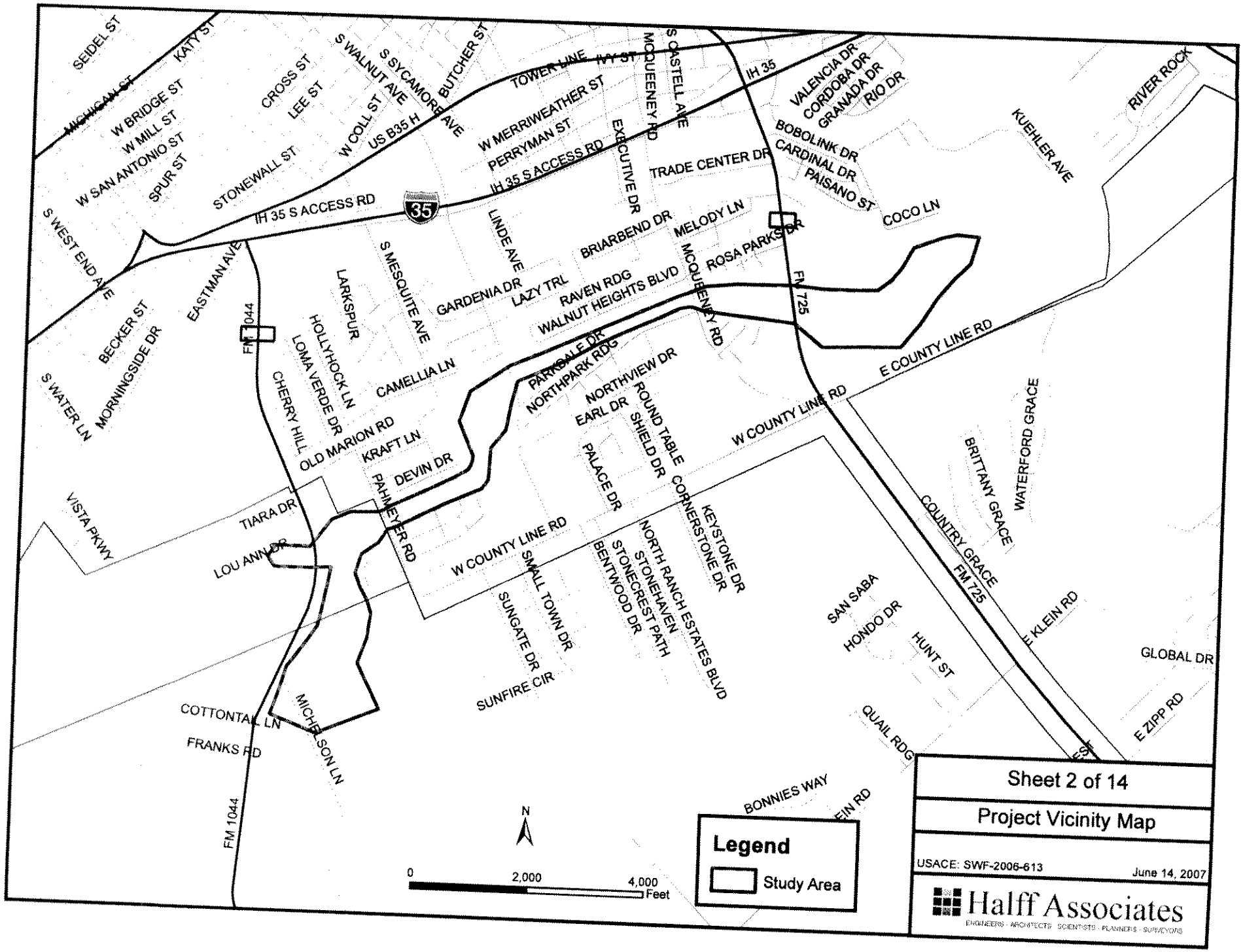
Sheet 1 of 14

Project Location Map

USACE: SWF-2006-613 June 14, 2007

Halff Associates

ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS



Sheet 2 of 14

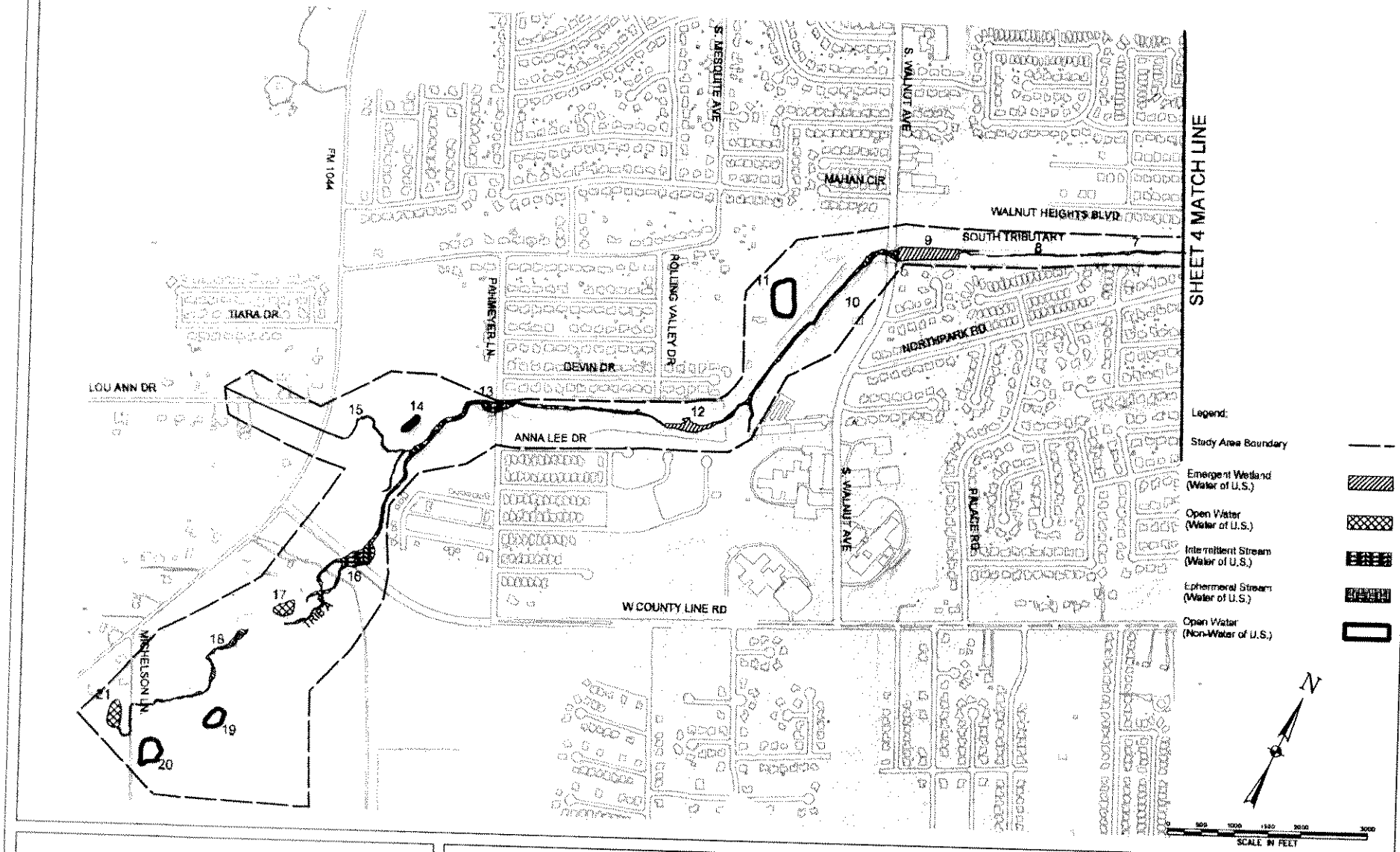
Project Vicinity Map

USACE: SWF-2006-613

June 14, 2007

Halff Associates

ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS

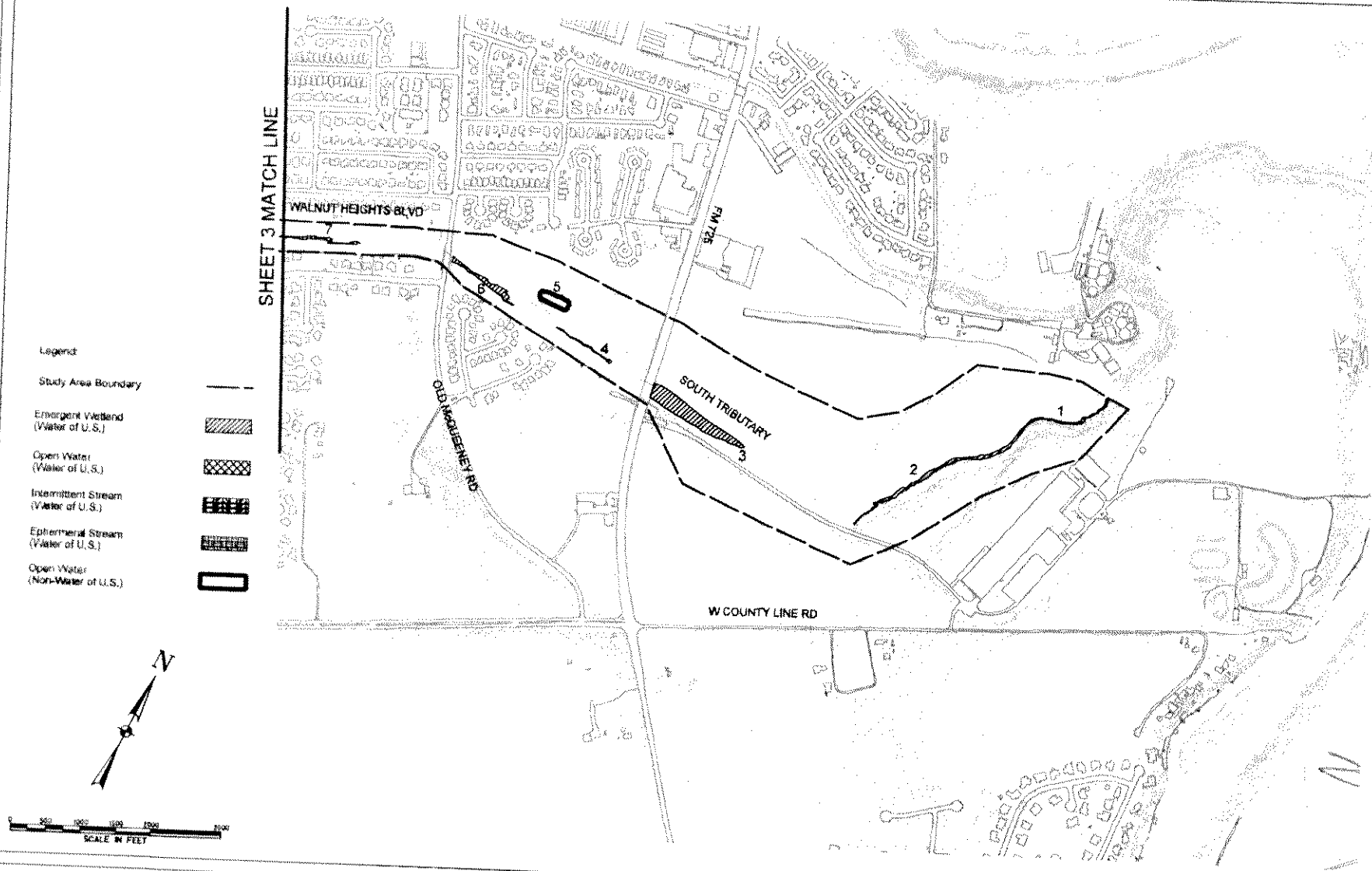


Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

South Tributary Regional Flood Control Project

New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918
Issued: June 14, 2007
JURIDICTIONAL DETERMINATION
SHEET 3 OF 14



Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

South Tributary Regional Flood Control Project

New Braunfels, Texas
USACE: SWF 2006 - 813

Project No.: 23918
Issued: June 14, 2007
JURIDICTIONAL DETERMINATION
SHEET 4 OF 14

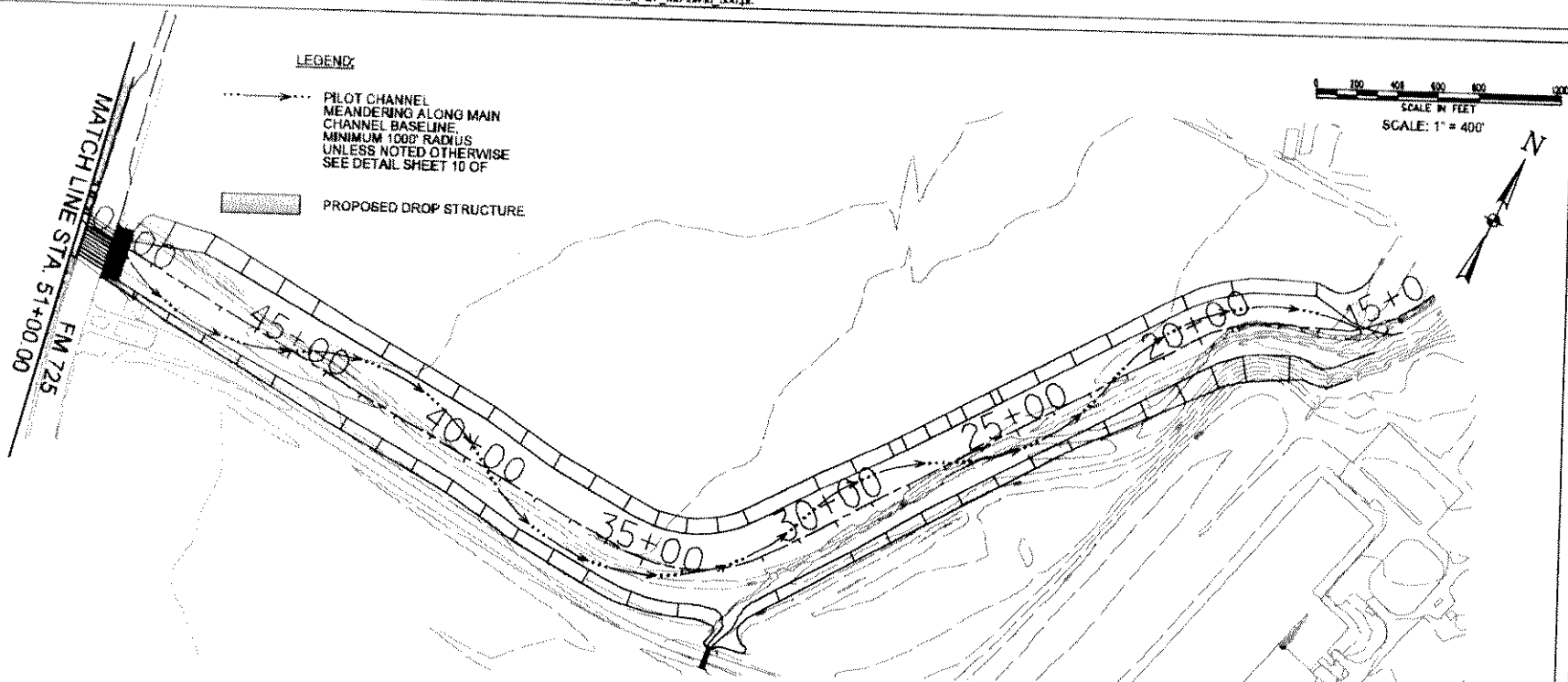
4/18/2007 10:01:37 AM ah2102 MSJ I:\23000s\23918\dgn\permit exhibits\USCOE Exhibit3(RM).dgn default 8609_3C_8-5x11.plt

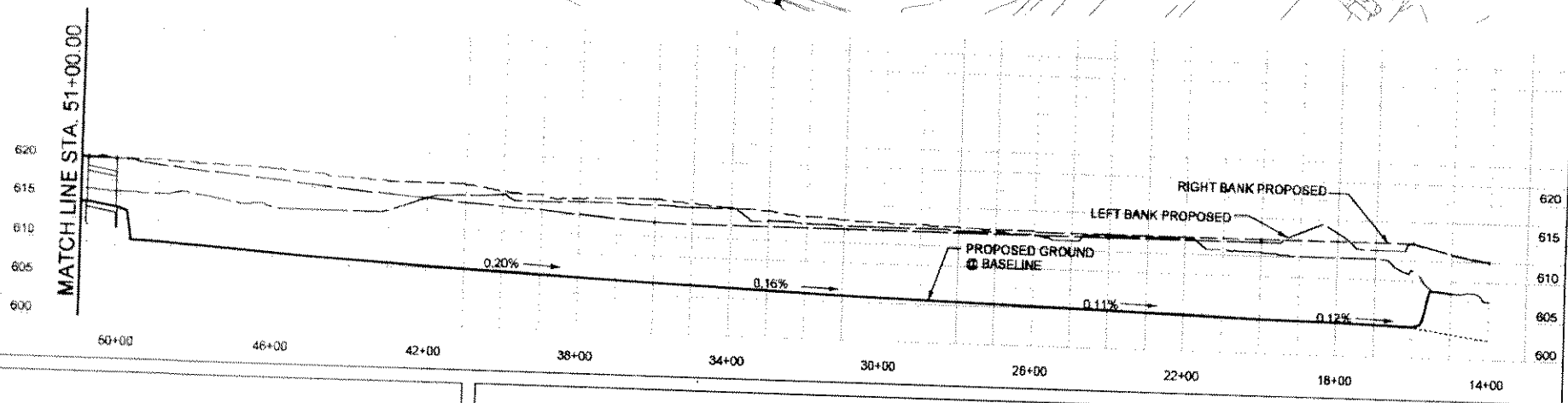
Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

South Tributary Regional Flood Control Project

New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.:	23918
Issued:	
KEY MAP	
SHEET 5 OF 14	





Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4202
TEL (214) 346-6280
FAX (214) 739-0095

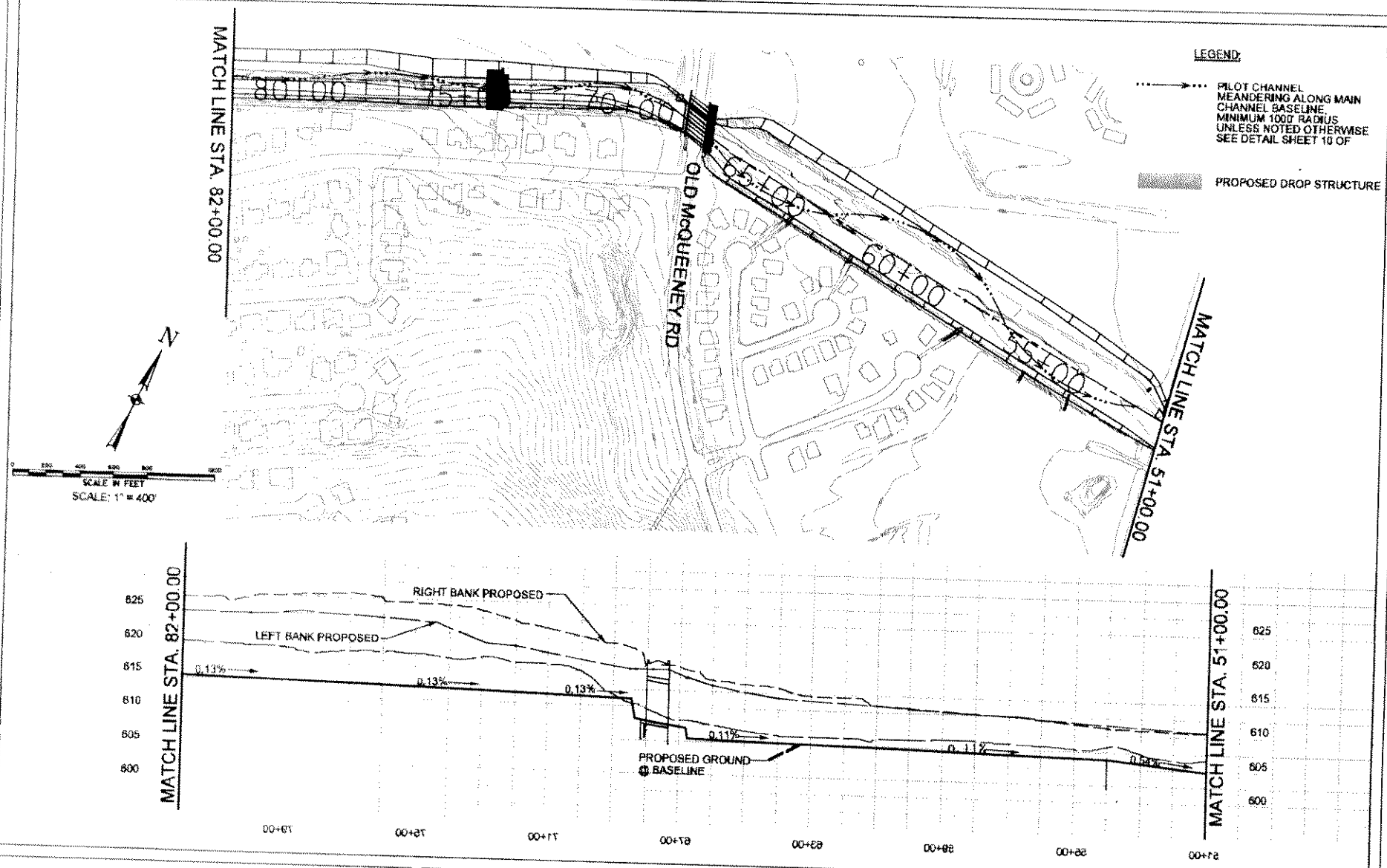
South Tributary Regional Flood Control Project

New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918
Issued: June 14, 2007

PROJECT PLAN VIEW

SHEET 6 OF 14



Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4282
TEL (214) 346-6200
FAX (214) 739-0095

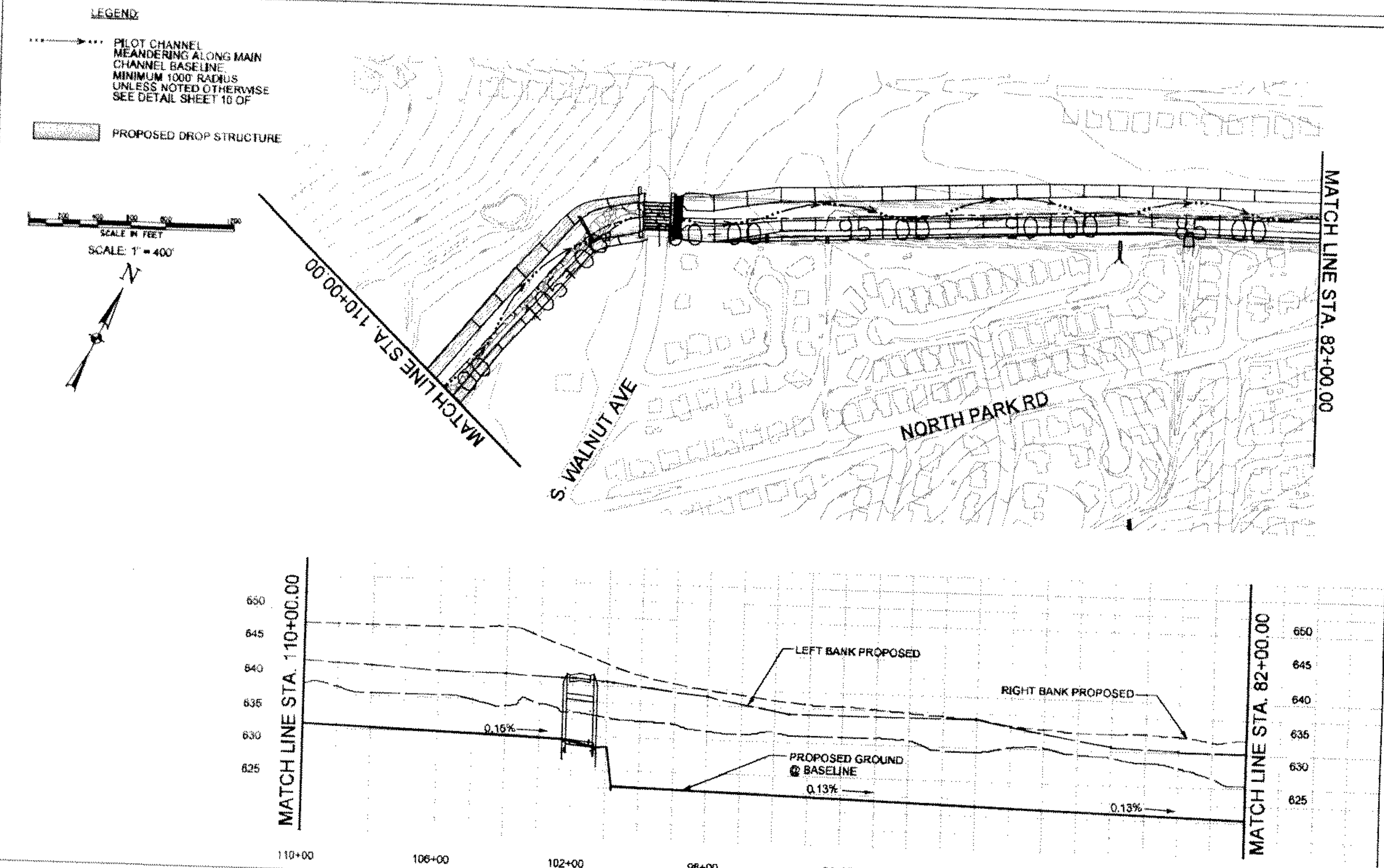
South Tributary Regional Flood Control Project

New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918
Issued: June 14, 2007

PROJECT PLAN VIEW

6/14/2007 12:45:02 PM FILE/FILE_PDF_MonoMid_300.plt

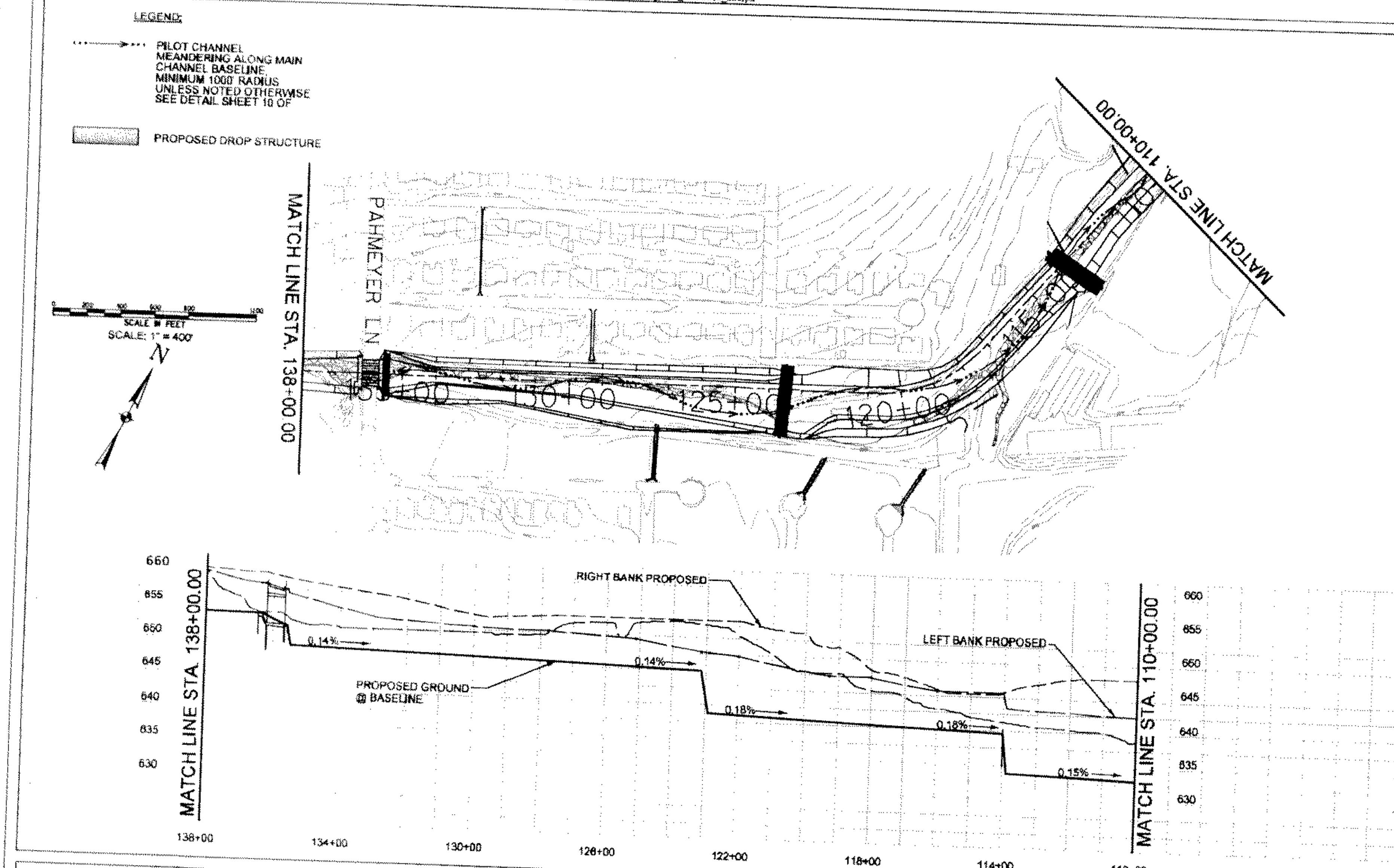


Halff Associates
ENGINEERS ARCHITECTS SCIENTISTS PLANNERS SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

South Tributary Regional Flood Control Project
New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918
Issued: June 14, 2007
PROJECT PLAN VIEW
SHEET 8 OF 14

6/14/2007 12:45:45 PM HALFF FILE/FILE_PDF_Mono_300.plt



Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

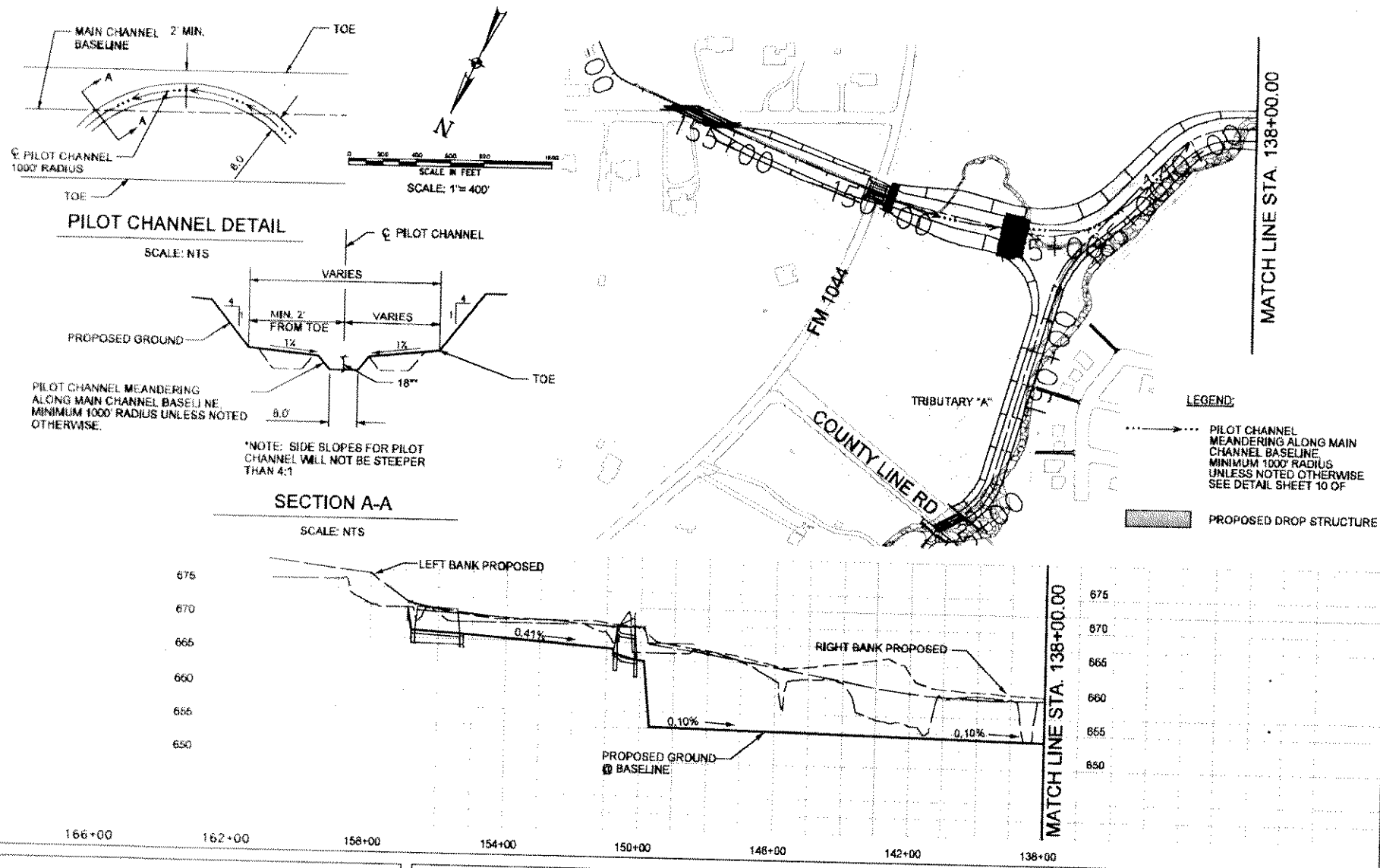
South Tributary Regional Flood Control Project

New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918
Issued: June 14, 2007

PROJECT PLAN VIEW

SHEET 9 OF 14



Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4282
TEL (214) 346-6200
FAX (214) 739-0095

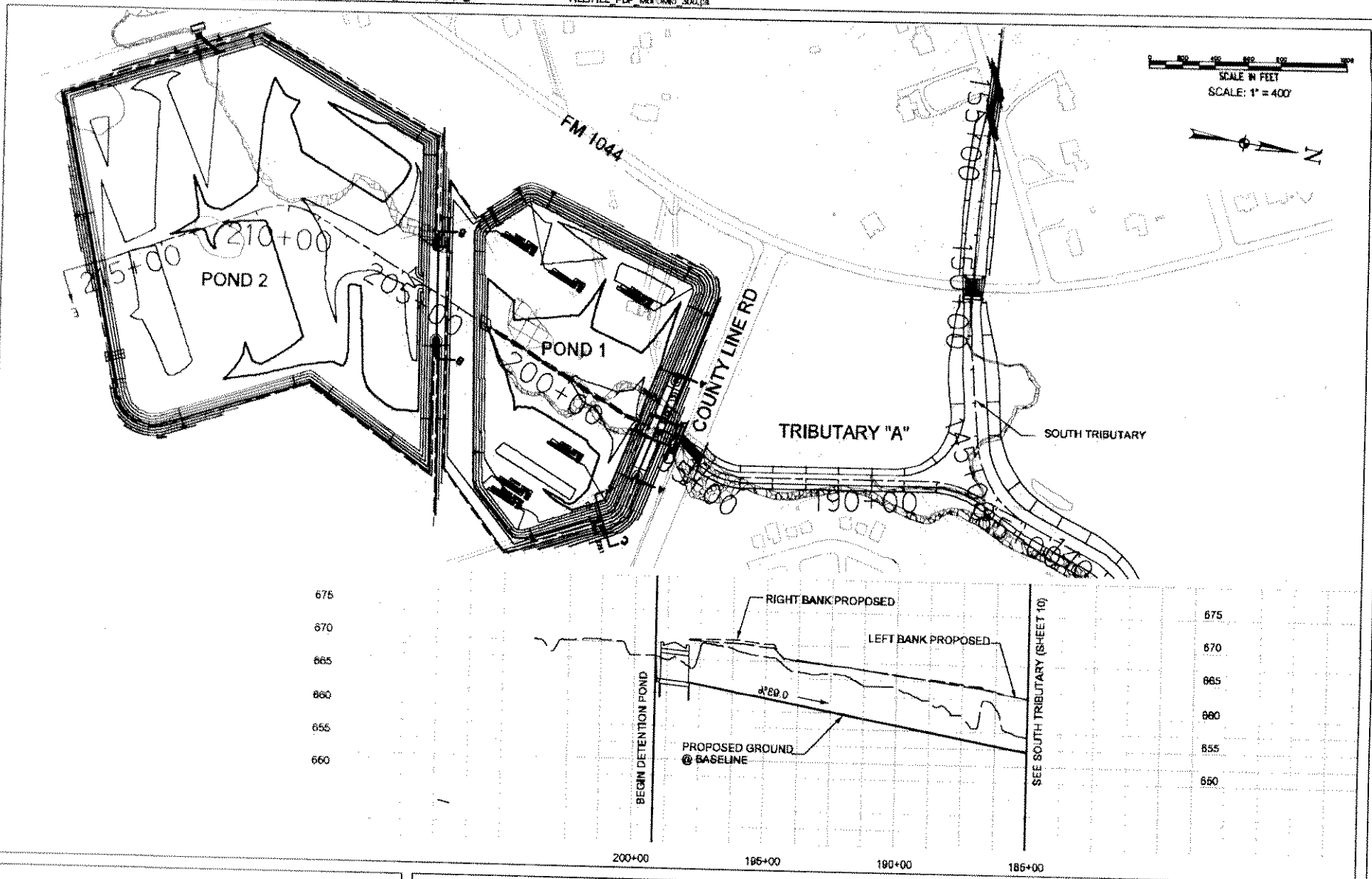
South Tributary Regional Flood Control Project

New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918
Issued: June 14, 2007

PROJECT PLAN VIEW

SHEET 10 OF 14



Halff Associates
ENGINEERS ARCHITECTS SCIENTISTS PLANNERS SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

South Tributary Regional Flood Control Project

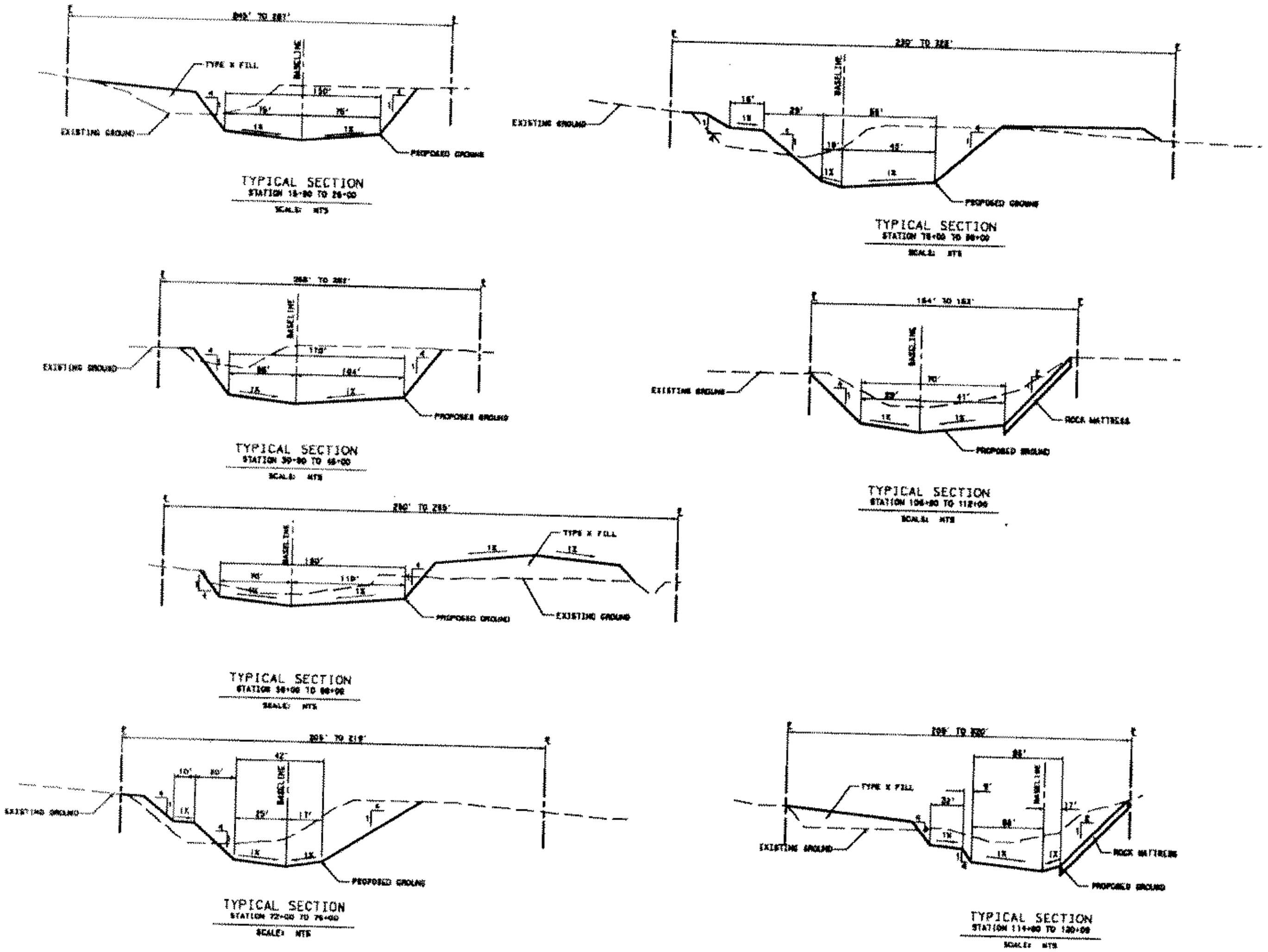
New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918
Issued: June 14, 2007

PROJECT PLAN VIEW

SHEET 11 OF 14

6/14/2007 12:51:33 PM HALFF FILE/FILE_PDF_MonoMid_300.plt



Halff Associates

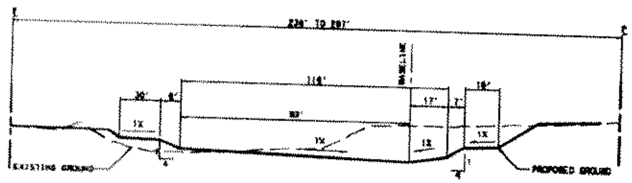
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

South Tributary Regional Flood Control Project

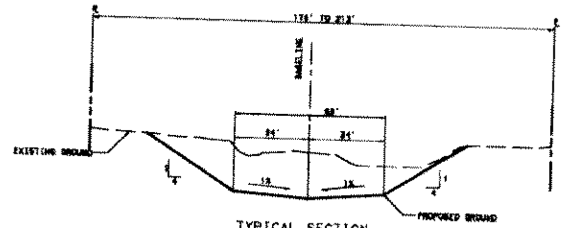
New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.:	23918
Issued:	June 14, 2007
CHANNEL SECTIONS	
SHEET 12 OF 14	

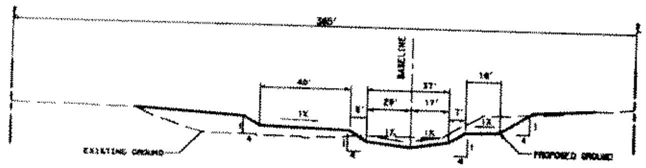
6/14/2007 12:51:52 PM HALFF FILE/FILE_PDF_MonoMid_300.plt



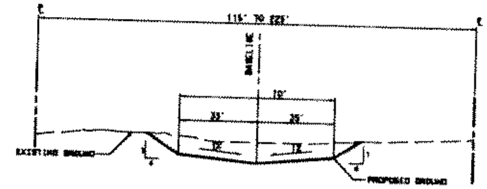
TYPICAL SECTION
STATION 123+00 TO 130+00
SCALE: NTS



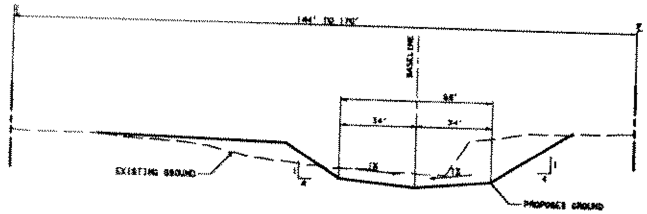
TYPICAL SECTION
STATION 146+00 TO 148+00
SCALE: NTS



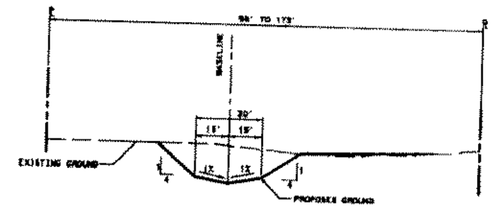
TYPICAL SECTION
STATION 130+00 TO 134+80
SCALE: NTS



TYPICAL SECTION
STATION 151+00 TO 154+90
SCALE: NTS



TYPICAL SECTION
STATION 138+00 TO 143+80
SCALE: NTS



TYPICAL SECTION
STATION [illegible]
SCALE: NTS

Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

South Tributary Regional Flood Control Project

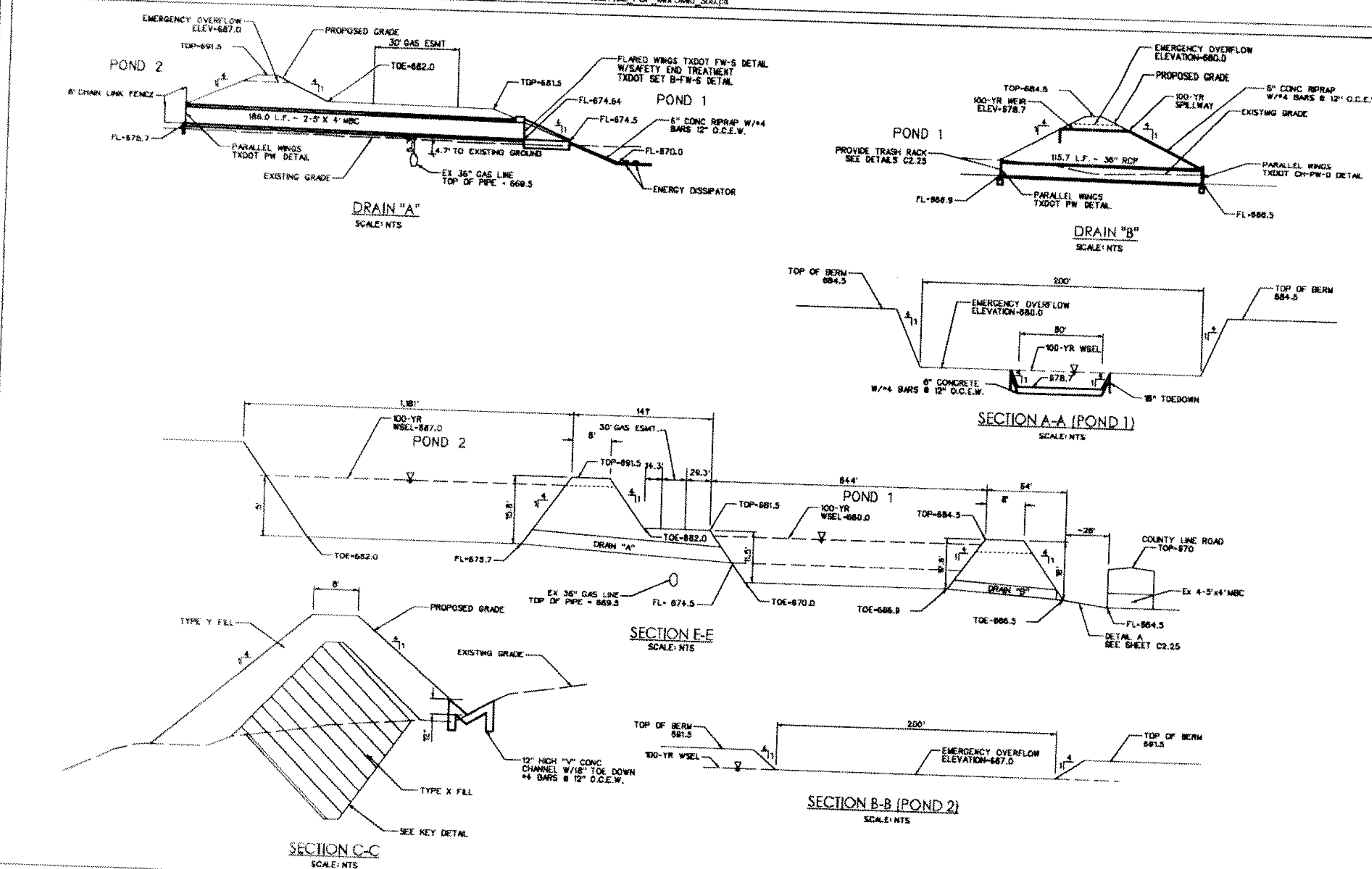
New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918
Issued: June 14, 2007

CHANNEL SECTIONS

SHEET 13 OF 14

6/14/2007 12:52:14 PM ah'2361 HALFF FILE/FILE_PDF_MonoMid_300.plt



Halff Associates
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS

8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225-4292
TEL (214) 346-6200
FAX (214) 739-0095

South Tributary Regional Flood Control Project

New Braunfels, Texas
USACE: SWF 2006 - 613

Project No.: 23918

Issued: June 14, 2007

DETENTION POND SECTIONS